

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.-69. (cancelled)

70. (new) A method for identifying an inhibitor of a protein kinase comprising:

a) providing a first reagent consisting of a peptide scaffold, wherein said peptide scaffold is a substrate for the protein kinase, covalently linked to a first module comprising one or more functional groups selected from the group consisting of boronic acid, a hydroxyl group, phosphonic acid, sulfamic acid, a guanidino group, a carboxylic acid, an aldehyde, an amide, and hydroxymethylphosphonic acid;

b) bringing into contact the first reagent, a protein kinase, and a natural substrate for the kinase under conditions sufficient to allow phosphorylation of the substrate;

c) determining the level of phosphorylation of the substrate in the presence of the first reagent and comparing said level to the level of phosphorylation in the absence of the first reagent;

d) selecting the first reagent that has a lower level of substrate phosphorylation in the presence of the first reagent relative to the level of phosphorylation of the substrate in the absence of the first reagent;

e) providing a second reagent consisting of a second module comprising a non-protein scaffold functional group selected from the group consisting of indole, naphthalene, biphenyl, isoquinoline, benzofuran, and benzothiophene, covalently linked to the first module of the first reagent selected in step d);

f) bringing into contact the second reagent, a protein kinase, and a natural substrate for the kinase under conditions sufficient to allow phosphorylation of the substrate;

g) determining the level of phosphorylation of the substrate in the presence of the second reagent and comparing said level to the level of phosphorylation in the absence of the second reagent;

h) selecting the second reagent that has a lower level of substrate phosphorylation in the presence of the second reagent relative to the level of phosphorylation of the substrate in the absence of the second reagent,
thereby identifying a protein kinase inhibitor.

71. (new) The method according to claim 70, wherein the first module comprises a boronic acid group.

72. (new) The method according to claim 70, wherein the first module comprises a hydroxyl group.

73. (new) The method according to claim 70, wherein the first module comprises an amide group.

74. (new) The method according to claim 73, wherein the amide group is a vicinal tricarbonyl amide.

75. (new) The method according to claim 70, wherein the first module further comprises a linear chain comprising between one and three carbon atoms which links the first module to the second module.

76. (new) The method according to claim 75, wherein one of the carbon atoms in the linear chain is substituted with a nitrogen, oxygen or sulfur atom.

77. (new) The method according to claim 70, wherein the second module comprises an indole.

78. (new) The method according to claim 70, wherein the second module comprises naphthalene.

79. (new) The method of claim 70, wherein the peptide scaffold is a pentapeptide.

80. (new) The method of claim 79, wherein the pentapeptide is Ac-Ile-**Tyr**-Gly-Glu-Phe-NH₂ or Ac-Arg-Arg-Gly-**Ser**-Ile-NH₂.

81. (new) The method of claim 70, wherein the pentapeptide is Ac-Ile-**Tyr**-Gly-Glu-Phe-NH₂ and the first module replaces the tyrosine hydroxyl group.

82. (new) The method of claim 70, wherein the pentapeptide is Ac-Arg-Arg-Gly-**Ser**-Ile-NH₂ and the first module replaces the serine CH₂OH group.

83. (new) The method according to claim 70, wherein the protein kinase is a protein tyrosine kinase.

84. (new) The method according to claim 83, wherein the protein tyrosine kinase is selected from the group consisting of pp60^{c-src}, p56^{lck}, ZAP kinase, platelet derived growth factor receptor tyrosine kinase, Bcr-Abl, VEGF receptor tyrosine kinase, and epidermal growth factor receptor tyrosine kinase, and epidermal growth factor receptor-like tyrosine kinases.

85. (new) The method according to claim 84, wherein the protein tyrosine kinase is pp60^{c-src}.

86. (new) The method according to claim 70, wherein the protein kinase is a protein serine kinase.

87. (new) The method according to claim 86, wherein the protein serine kinase is selected from the group consisting of MAP kinase, protein kinase C, and CDK kinase.

88. (new) The method according to claim 70, further comprising:

i) providing a third reagent consisting of the second reagent selected in step h) covalently linked to one or more specificity elements (S)_n;

j) bringing into contact the third reagent, a protein kinase, and a natural substrate for the kinase under conditions sufficient to allow phosphorylation of the substrate;

k) determining the level of phosphorylation of the substrate in the presence of the third reagent and comparing said level to the level of phosphorylation in the absence of the third reagent;

l) selecting the third reagent that has a lower level of substrate phosphorylation in the presence of the third reagent relative to the level of phosphorylation of the substrate in the absence of the third reagent,

thereby identifying a protein kinase inhibitor.

89. (new) The method of claim 70, wherein the first reagent in step a) is rationally designed using molecular modeling.

90. (new) The method of claim 70, wherein the second reagent in step e) is rationally designed using molecular modeling.

91. (new) The method of claim 88, wherein the third reagent in step i) is rationally designed using molecular modeling.

Applicant(s): Hangauer *et al.*
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92. (new) The method of claim 88 wherein the one or more specificity elements are selected from an amine, an alkyl group, a hydroxyl group, an amide, an ester, and 3-aminophenol.

93. (new) The method of claim 70, wherein the conditions sufficient to allow phosphorylation are Literature Mimetic conditions.

94. (new) The method of claim 70, wherein the conditions sufficient to allow phosphorylation are Cellular Mimetic conditions.